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# ILLINOIS NATURAL HISTORY SURVEY



## CENTER FOR WILDLIFE ECOLOGY

Cooperative Furbearer Research  
**Red Fox Studies**

Project W-111-R-2

**Annual Report**

by

Richard E. Warner and Barbara Ver Steeg  
Illinois Natural History Survey

1 July 1992 through 30 June 1993

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State: Illinois

Project No.: W-111-R-2

Sub-project No. 1; Title: Red Fox Census Techniques

Study No.: 1; Title: Census techniques for determining the status of the red fox in Illinois.

Job No.: 1; Title: Aerial and ground censuses of red foxes.

Objectives: To estimate red fox densities (based on counts of fox families per selected townships and counties) using fixed wing aircraft and follow-up ground recognizance.

Progress: Of the six counties selected for aerial censuses of fox dens, only 4 were surveyed this spring (DeKalb, Ford, Logan and Mason). Inclement spring weather interfered with flight opportunities for the other counties. Abundant digging activity was observed in Ford and Logan counties, but follow-up ground observations revealed that this was exclusively badger activity, with one possible coyote den. No active fox dens were observed in any of the 4 townships surveyed. Continually wet ground conditions may have reduced observation accuracy. In addition, weather may have delayed fox breeding activity, making some of the flights' timing inappropriate.

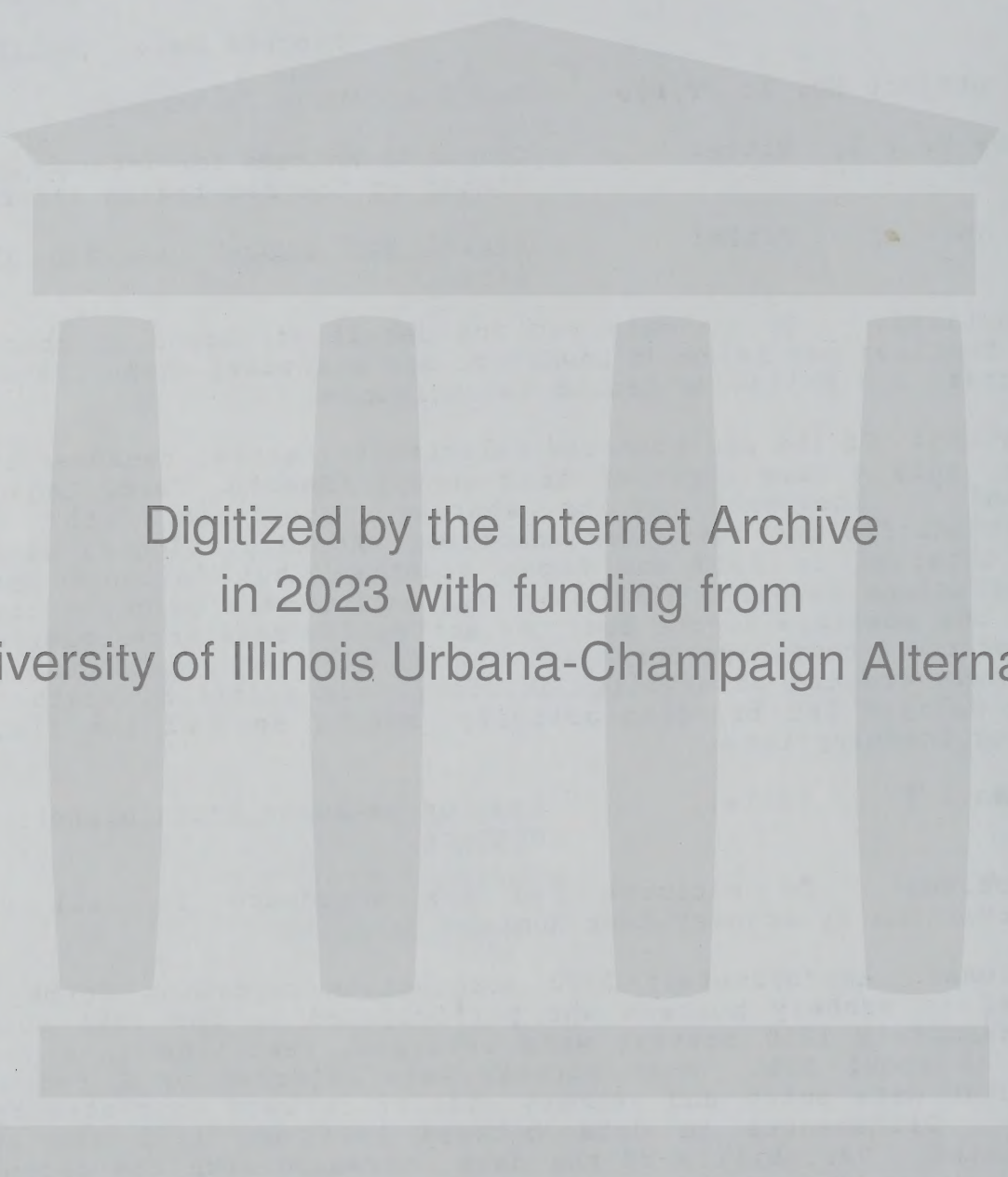
Job No.: 2; Title: Red fox censuses using archery deer hunters.

Objectives: To estimate red fox abundance in fall using observations by archery deer hunters.

Progress: Approximately 2500 observation recording forms were mailed to archery hunters who participated in the 1991 survey. Approximately 1250 surveys were returned, resulting in a return rate of about 50%. Most surveys were returned by 1 February. Computer data entry and summary statistics were completed by 30 June. Differences in data between 1991 and 1992 are being evaluated. Variability of the data increased with the decreased sample size. More hunters will need to be recruited for the third year of the survey.

Job No.: 3; Title: Red fox censuses using rural mail carriers.

Objectives: To estimate red fox abundance in spring using rural mail carriers observations.



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Progress: A reporting form was developed and mailed to approximately 2000 rural mail carriers statewide. Observers recorded sightings of red fox and pheasants during 5 days in April. Approximately 1100 of the surveys (55%) have been returned, and information is currently being entered in a computer file.

Job No.: 4; Title: Analysis of data and reporting.

Objectives: To (1) analyze data collected in Jobs 1-3, and to associate these statistics with other data sets describing long term trends in red fox abundance and changes in environmental factors; (2) recommend means for accurately and reliably censusing red fox in Illinois; and (3) to report the findings, ultimately in peer-reviewed manuscripts.

Progress: Analyses to compare archery hunter survey data from the two years are being completed.

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Prepared by:

Richard E. Warner and Barbara Ver Steeg

Principal Investigators

Date: 28 July 1993

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